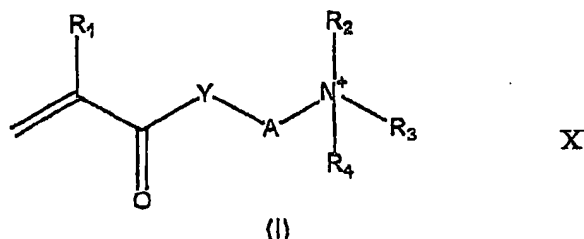


## CLAIMS

1. Inverse emulsion wherein the weight ratio between the aqueous phase and the organic phase is from 4:1 to 2:1 and containing from 20 to 70% by weight of an acrylic polymer obtained by inverse emulsion polymerisation of
- i. from 55 to 75% by weight of an anionic acrylic monomer containing a strongly acidic functional group;
  - ii. from 0.1 to 5% by weight of a cationic acrylic monomer of the formula (I)



wherein

$R_1$  is hydrogen or methyl;

$R_2$ ,  $R_3$ ,  $R_4$  are, one independently of the others, hydrogen or  $C_1$ - $C_4$  alkyl;

$Y$  is NH or O;

$A$  is a  $C_1$ - $C_8$  alkylene;  $X$  is chloride,

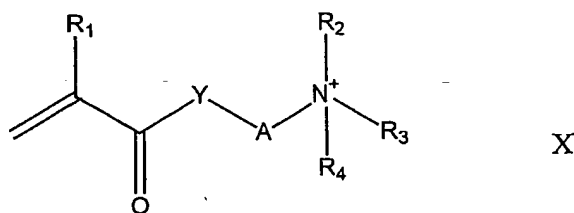
iii. from 25 to 45% by weight of a  $C_3$ - $C_5$  anionic acrylic monomer containing a carboxylic group.

2. Inverse emulsion according to claim 1., wherein the acrylic polymer is obtained by inverse emulsion polymerisation of

- i. from 60 to 70% by weight of an anionic acrylic monomer containing a strongly acidic functional group;
- ii. from 2 to 4% by weight of a cationic acrylic monomer of the formula (I);
- iii. from 30 to 40% by weight of a  $C_3$ - $C_5$  anionic acrylic monomer containing a carboxylic group.

15

3. Inverse emulsion according to claim 1. or 2., wherein the anionic acrylic monomer containing a strongly acidic functional group is 2-acrylamido-2-methylpropanesulfonic acid.
4. Inverse emulsion according to claim 3., wherein the cationic acrylic monomer of the formula (I) is selected from acryloyloxyethyltrimethylammonium chloride and methacryloyloxyethyltrimethylammonium chloride.
5. Inverse emulsion according to claim 3. or 4., wherein the C<sub>3</sub>-C<sub>5</sub> anionic acrylic monomer containing a carboxylic group is selected from acrylic acid and methacrylic acid.
6. Inverse emulsion according to any of the preceding claims, wherein the acrylic polymer obtained by inverse emulsion polymerisation is cross-linked with from 0.01 to % by weight of a compound containing two or more ethylenic groups.
7. Inverse emulsion according to claim 6., wherein the acrylic polymer obtained by inverse emulsion polymerisation is cross-linked with methylene-bis-acrylamide.
8. Procedure for the preparation of an inverse emulsion characterised by:
  - a. preparing a composition consisting of from 40 to 60% by weight of water, and for the remaining percentage by weight of a mixture of acrylic monomers consisting of:
    - i. from 55 to 75% by weight of an anionic acrylic monomer containing a strongly acidic functional group;
    - ii. from 0.1 to 5% by weight of a cationic acrylic monomer of the formula (I)



(1)

wherein

R<sub>1</sub> is hydrogen or methyl;

R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> are, one independently of the others, hydrogen or C<sub>1</sub>-C<sub>4</sub> alkyl;

Y is NH or O;

A is a C<sub>1</sub>-C<sub>8</sub> alkylene; X is chloride,

iii. from 25 to 45% by weight of a C<sub>8</sub>-C<sub>9</sub> anionic acrylic monomer containing a carboxylic group;

b. adding to the composition prepared in a. an aqueous solution of an alkali to regulate the pH between 4 and 7, a cross-linking agent and an initiator of radical polymerisation, maintaining the temperature between 3 and 7°C;

c. preparing an organic phase containing one or more water-in-oil emulsifiers;

d. introducing the mixture obtained in b. into the organic phase prepared in c. and emulsifying the two phases by vigorous stirring;

e. initiating the polymerisation and completing it maintaining the temperature between 55 and 95°C under vigorous stirring;

f. cooling the reaction mixture to 35-45°C and adding an oil-in-water emulsifier.

9. Procedure for the preparation of an inverse emulsion according to claim 8., wherein the mixture of acrylic monomers of the phase a. consists of:

i. from 60 to 70% by weight of an anionic acrylic monomer containing a strongly acidic functional group;

ii. from 2 to 4% by weight of a cationic acrylic monomer of the formula (I);

iii. from 30 to 40% by weight of a C<sub>9</sub>-C<sub>5</sub> anionic acrylic monomer containing a carboxylic group;

10. Procedure for the preparation of an inverse emulsion according to claim 8. or 9., wherein the anionic acrylic monomer containing a

17

strongly acidic functional group is 2-acrylamido-2-methylpropanesulfonic acid.

11. Procedure for the preparation of an inverse emulsion according to claim 11., wherein the cationic acrylic monomer of the formula (I) is selected from acryloyloxyethyl-trimethylammonium chloride and methacryloyloxyethyl-trimethylammonium chloride.
12. Procedure for the preparation of an inverse emulsion according to claim 11., wherein the C<sub>3</sub>-C<sub>5</sub> anionic acrylic monomer containing a carboxylic group is selected from acrylic acid and methacrylic acid.
13. Procedure for the preparation of an inverse emulsion according to any of the claims from 8. to 12., wherein the acrylic polymer obtained by inverse emulsion polymerisation is cross-linked with from 0.01 to 1% by weight of a compound containing two or more ethylenic groups.
14. Procedure for the preparation of an inverse emulsion according to claim 13., wherein the acrylic polymer obtained by inverse emulsion polymerisation is cross-linked with methylene-bis-acrylamide.
15. Use of an inverse emulsion according to any of the claims from 1. to 7., for the preparation of cosmetic formulations.